

In the Claims:

Please rewrite Claim 14 as follows.

AI 14. (ONCE AMENDED) The method of claim 8 wherein said  
[phosphorous] arsenic ion source comprises solid  
[phosphorous] arsenic.

#### REMARKS

Examiner G. Peralta is thanked for the thorough Search and Examination of the Subject Application for Patent.

Claim 14 has been amended to replace two occurrences of "phosphorus" with -- arsenic -- so that Claim 14 will be consistent from Claim 8 from which Claim 14 depends. The basis for this amendment to Claim 14 can be found in the Specification from page 6, line 21 to page 7, line 3.

Reconsideration of the Rejection of Claim 14 under 35 U.S.C. § 112, second paragraph is requested. Claim 14 has been amended to replace two occurrences of "phosphorus" with -- arsenic --. Claim 8, from which Claim 14 depends,

provides antecedent basis for an arsenic ion source. It is believed that, as amended, Claim 14 meets the requirements of 35 U.S.C. § 112, second paragraph.

Reconsideration of the Rejection of Claims 1-4, 7-11, 15-18, 21-25, and 28 under 35 U.S.C. § 103(a) as being unpatentable over Wu et al. (U.S. Pat. No. 4,560,879) in view of Wolf, "Silicon Processing for the VLSI Era, Volume 2: Process Integration" is requested. Claims 1-4, 7-11, 15-18, 21-25, and 28 describe methods of doping a polysilicon electrode or source/drain region by ion implantation with either singly charged molecular phosphorus ions,  $P_2^+$ , or singly charged molecular arsenic ions,  $As_2^+$ .

The invention of Wu et al. describes methods of ion implantation of doubly charged ions, such as  $P^{++}$  or  $As^{++}$  ions. ~~The method described by Wu et al. is intended to eliminate any singly charged ions, such as  $P^+$  or  $As^+$  ions, or singly charged molecular ions, such as  $P_2^+$  ions or  $As_2^+$  ions, see column 1, lines 5-8.~~

The implantation of singly charged molecular ions,  $P_2^+$  ions or  $As_2^+$  ions, as described in the methods of Claims 1-4, 7-11, 15-18, 21-25, and 28 is different from and not obvious from the methods of ion implantation of doubly charged ions described by Wu et al. The methods of Wu et

al. are specifically designed to eliminate  $P_2^+$  ions or  $As_2^+$  ions from the ion implantation beam.

Wolf (Volume 2) describes ion implantation of polysilicon electrodes and source drain regions, however Wolf (Volume 2) does not describe, nor make obvious, ion implantation of singly charged molecular ions, such as  $P_2^+$  ions or  $As_2^+$  ions, as is described in the methods of Claims 1-4, 7-11, 15-18, 21-25, and 28.

It is believed that Claims 1-4, 7-11, 15-18, 21-25, and 28 are different from, not obvious from, and patentably distinct from Wu et al. in view of in view of Wolf (Volume 2). Reconsideration of the Rejection of Claims 1-4, 7-11, 15-18, 21-25, and 28 under 35 U.S.C. § 103(a) as being unpatentable over Wu et al. (U.S. Pat. No. 4,560,879) in view of Wolf, "Silicon Processing for the VLSI Era, Volume 2: Process Integration" is requested.

Reconsideration of the Rejection of Claims 1-13, and 15-28 under 35 U.S.C. § 103(a) as being unpatentable over Wu et al. (U.S. Pat. No. 4,560,879) in view of Wolf, "Silicon Processing for the VLSI Era, Volume 2: Process Integration", as applied to Claims 1-4, 7-11, 15-18, 21-25, and 28, and further in view of Wolf et al., "Silicon Processing for the VLSI Era, Volume 1: Process Technology"

is requested. Claims 1-13 and 15-28 describe methods of doping a polysilicon electrode or source/drain region by ion implantation with either singly charged molecular phosphorus ions,  $P_2^+$ , or singly charged molecular arsenic ions,  $As_2^+$ .

The invention of Wu et al. describes methods of ion implantation of doubly charged ions, such as  $P^{++}$  or  $As^{++}$  ions. The method described by Wu et al. is intended to eliminate any singly charged ions, such as  $P^+$  or  $As^+$  ions, or singly charged molecular ions, such as  $P_2^+$  ions or  $As_2^+$  ions, see column 1, lines 5-8.

The implantation of singly charged molecular ions,  $P_2^+$  ions or  $As_2^+$  ions, as described in the methods of Claims 1-13 and 15-28, is different from and not obvious from the methods of ion implantation of doubly charged ions described by Wu et al. The methods of Wu et al. are specifically designed to eliminate  $P_2^+$  ions or  $As_2^+$  ions from the ion implantation beam.

Wolf (Volume 2) describes ion implantation of polysilicon electrodes and source drain regions, however Wolf (Volume 2) does not describe, nor make obvious, ion implantation of singly charged molecular ions, such as  $P_2^+$  ions or  $As_2^+$  ions, as is described in the methods of Claims 1-13 and 15-28.

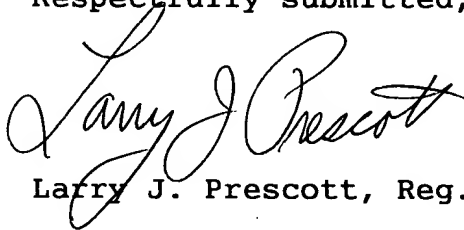
Wolf et al. (Volume 1) describes annealing of silicon after ion implantation, however Wolf et al. (Volume 1) do not describe, nor make obvious, ion implantation of singly charged molecular ions, such as  $P_2^+$  ions or  $As_2^+$  ions, as is described in the methods of Claims 1-13 and 15-28.

It is believed that Claims 1-13 and 15-28 are different from, not obvious from, and patentably distinct from Wu et al. in view of Wolf (Volume 2) and further in view of Wolf et al. (Volume 1). Reconsideration of the Rejection of Claims 1-13, and 15-28 under 35 U.S.C. § 103(a) as being unpatentable over Wu et al. (U.S. Pat. No. 4,560,879) in view of Wolf, "Silicon Processing for the VLSI Era, Volume 2: Process Integration", as applied to Claims 1-4, 7-11, 15-18, 21-25, and 28, and further in view of Wolf et al., "Silicon Processing for the VLSI Era, Volume 1: Process Technology" is requested.

Although Claim 14 was not included in any of the 35 U.S.C. § 103(a) rejections, the above arguments in the request for reconsideration of the rejection of Claims 1-4, 7-11, 15-18, 21-25, and 28 and the request for reconsideration of the rejection of Claims 1-13 and 15-28 apply to Claim 14, as amended, as well.

It is requested that should Examiner Peralta not find that the Claims are now Allowable that the Examiner call the undersigned Agent at (914)-462-5363 to overcome any problems preventing allowance.

Respectfully submitted,

A handwritten signature in cursive script, reading "Larry J. Prescott". The signature is written in dark ink and is positioned above the printed name.

Larry J. Prescott, Reg. No. 39,335